

# [METHOD AND APPARATUS FOR OBJECTIVE MEASUREMENT OF NOISE]

## Abstract of Disclosure

A method of objectively and subjectively monitoring noise and correspondingly level or loudness thereof in a product or assembly. The method includes placing a product on the vibration generator. Activating the vibration generator to move or shake the product to simulate usage conditions. A sound recording instrument measures and records the noise emitted by the product or assembly. An objective metric or N10 level is computed from the recorded noise. The objective metric or N10 level is compared to a threshold metric or threshold N10 level. When the objective metric or N10 level exceeds the threshold metric or threshold N10 level, an operator or technician subjectively evaluates the vehicle to determine the source of the noise and performs any repairs necessary along with documenting those repairs. The objective metric or N10 level along with the threshold metric or threshold N10 level are saved along with the information relating to the source of the noise and necessary repairs for further evaluation and statistical analysis. Statistical processing is done on all the measured product or assembly saved in the database for generating reports, including preparing charts or graphs enabling the data to be analyzed. Feedback reports to the assembly/fabrication line relating to cause and repairs so manufacturing/design improvements can be implemented to eliminate size to minimize the occurrence of undesired noise.